

Weekly Summary Report

USEPA Oversight, Sauget Area 2, Sauget, IL

WA No. 224-RXBF-05XX / Contract No. 68-W6-0025

Week Ending Friday June 25, 2004

This report summarizes the Interim Remedial Action (IRA) work conducted by Solutia and its contractors from June 21 through June 25, 2004 at Site R, Sauget Area 2. The current IRA fieldwork consists of site preparation, barrier wall trenching, and backfilling.

Contractors Onsite

Inquip Associates Inc. (barrier wall construction contractor)
PSI (geotechnical testing subcontractor)
Belleville Fence Company (subcontractor working on relocating fence)
Lowry Electric (electrical contractor to Solutia)
URS (primary consultant for Solutia)
Pangea (subcontractor to Inquip for site maintenance)

Work Performed This Week

The primary activities conducted during the week were backfilling, trench cleanout and further excavation of the trench. Along the east-west leg of the trench at the southernmost section of the barrier wall, approximately 15 feet of trench was excavated by the hydraulic or mechanical clamshell rigs to total depth; excavation of the segment of the barrier wall at southeastern corner is almost completed to total depth. Backfill was placed on two days during the week.

Trench cleaning was performed on four days during the week. On June 23, maintenance was performed on both clamshell rigs. The power line which was blocking access to the clamshells working at station 5+00 was removed by Ameren UE on June 24. Subsequently, the hydraulic clamshell rig began excavating the remaining panel and wedge at station 5+00. Only one clamshell rig was utilized at any given time as there was insufficient work space for the two rigs to operate in the active area of the southern leg of the barrier wall alignment.

A third clamshell rig, a Liebherr 843 crane, was delivered to the site during the week. The rig has not been assembled.

Groundwater Migration Control System (GMCS)

The river elevation showed a slight decreasing trend during the week; a river level of 406.06 feet above mean seal level (amsl) was observed on June 18, decreasing to 404.83 feet amsl on June 25, 2004. Correspondingly, the combined flow rate of the extraction well system slightly increased from 350 gallons per minute (gpm) on June 18 to 430 gpm on June 25.

Eight barrier wall piezometers, with four inside and four outside the barrier wall alignment,

monitored the groundwater water elevations adjacent to the barrier wall alignment during the week. URS repaired a problem in the fuse box at piezometer location P4W on June 21. Subsequently, the transducer contained in the well resumed relaying groundwater elevation data back to the GMCS after a period of at least one week with no data.

For less than one hour on June 24, and for approximately six hours on June 25, the pump at Extraction Well 3 was turned off in order to allow an electrical line to be connected between the well vault and a beacon on the electrical tower located in the southwest corner of Site R. (The GMCS system will serve as the electrical source for this beacon while the power lines that cross the southeast corner of the trench at station 5+00 are disconnected.) During the time frame while EW-3 was not operating on June 25, water levels at P3E and P4E increased approximately one foot.

Table 1 shows the river and piezometer water elevations measured on June 25, 2004 (2:00 PM). Piezometer pairs P2, P3 and P4, located in the center and south side of Site R, showed water levels greater outside the barrier wall than inside, with approximately one foot to two feet difference in elevation. At piezometer P1S and P1N, the water levels averaged approximately 1 foot higher inside the barrier wall alignment; however, it should be noted that the barrier wall is not yet constructed in this area. The river elevation was generally four feet higher than water levels measured at all piezometers throughout the week, indicating an inward groundwater flow from the river toward Site R.

Table 1
River and Piezometer Water Elevations – June 25, 2004 (14:00)

	Elevation (ft above mean sea level)
River Level	404.83
Piezometer 1S – inside wall (northern-most pair)	399.48
Piezometer 1N – outside wall (northern-most pair)	398.45
Piezometer 2E – inside wall (north-central pair)	398.81
Piezometer 2W – outside wall (north-central pair)	400.44
Piezometer 3E – inside wall (south-central pair)	399.22
Piezometer 3W – outside wall (south-central pair)	400.81
Piezometer 4E – inside wall (southern-most pair)	398.51
Piezometer 4W – outside wall (southern-most pair)	399.78

Stormwater

No stormwater activities occurred during the week.

Slurry Mixing

Approximately 21 tons of bentonite gel were used to mix fresh slurry on one day during the week. The slurry, when pumped from the south holding pond to the open trench near station 14+90, was tested frequently to assess its viscosity and adjusted with a blending pump using water from the fire hydrant, as necessary. The viscosity of the slurry was measured using a Marsh funnel, with results generally meeting the specification.

Spoils Handling

During the week, spoils were transferred from the excavation area along the southern leg of the barrier wall alignment to either the temporary stockpile area on top of the landfill or to the backfill mix pad.

Barrier Wall Construction

Inquip continued excavation of the trench along the south arm of the barrier wall alignment with the hydraulic and mechanical clamshell rigs used for both trench bottom cleaning and deeper excavation. The Koehring 1266 trackhoe has been moved to the north-central portion of Site R, near station 26+00, but was not utilized during the week. The 1266 trackhoe is scheduled to start excavating in this area in the following week.

As of June 25, the open trench was approximately 1,110 feet in length along the barrier wall alignment from station 5+00 to station 16+10 (please refer to Solutia's map for locations).

Fresh bentonite slurry was pumped into the open trench as needed to keep the excavation open on two days during the week. Slurry samples were collected from the top and the bottom of the trench daily; fresh and trench slurry samples were tested for viscosity, density (unit weight), filtrate loss, pH and sand content during the week. All the results either met the specifications or satisfied the quality targets. The mechanical desander operated daily throughout the week, however the intake valve frequently became plugged and the desander was stopped and cleaned. The desander was moved on June 22, with use of the Liebherr 855 crane, to station 6+30.

During the week, Inquip mixed and placed into the trench approximately 540 cubic yards of backfill materials. Backfill operations took place on two days during the week. The backfill consisted of spoils with the addition of two percent bentonite and five percent clean clay soil.

The backfill was tested by PSI for slump, unit weight and moisture content. The unit weight of backfill placed during the week measured between 123 and 126 pounds per cubic foot (pcf). Slump test results were between 4 to 4.5 inches, and the moisture content results ranged from 20.1 to 21.8 percent. All test results met the minimum requirements. Tests on the backfill mixture to be conducted offsite included permeability and gradation.

Permeability and gradation tests were reviewed for the last two weeks. The permeability results from samples collected through June 16, 2004 met or generally outperformed the permeability specification. Gradation analysis reviewed (samples collected through June 21) met the specifications.

The bottom of the trench at and ahead of the backfill toe was cleaned using the clamshell rig prior to the backfill placement. Depth-to-bottom measurements were made every 10 linear feet of trench to ensure the bottom of the trench was at a consistent depth and on top of bedrock. These depth measurements were performed with the clamshell rig's instrumentation and were manually confirmed at two locations with the downrigger (plumbob on wire). On a daily basis, two samples were collected by PSI with a clam sampler from the top of the placed backfill in the trench prior to backfill placement. These samples were visually checked to ensure that the backfill surface in the trench was clean and free of any sand.

During the week, the trench depths were measured each afternoon. The trench depth measurements from the profile measured on June 25 (PM) are shown in Table 2, and

depicted in Graph 1 in comparison to the trench depth profile measured on June 18. Graph 2 shows the overall progress of the barrier wall construction.

Pre-trenching began at station 24+50 on the north side of the Site R on June 25, 2004. Approximately 55 linear feet of excavation were pre-trenched with the 470 trackhoe to a depth of 20ft bgs.

Other Activities

Ameren UE was onsite on June 24 and removed the power lines located above the southeast end of the barrier wall trench, at station 5+00.

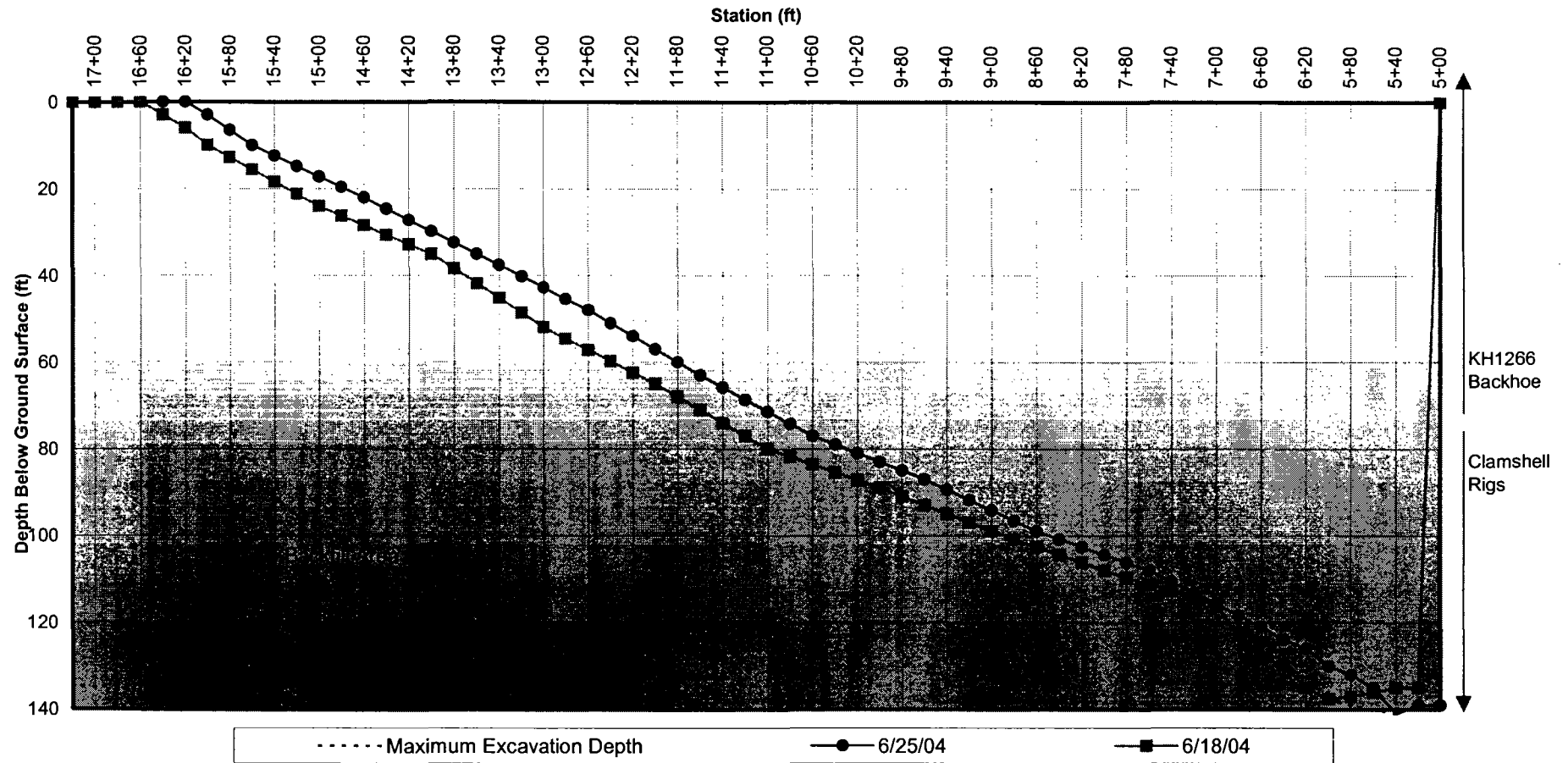
Belleville Fence Company was on site two days this week installing temporary fencing on the northeast construction entrance crossing the Eagle Marine property.

Lowry Electric was on site three days during week connecting electric between the junction box for EW-3 and the beacon on top of the electric distribution tower located in the southwest corner of Site R. Electricity was supplied to power the beacon light on the tower from the GMCS system as the power supply to the beacon was interrupted when the power line at station 5+00 was removed. Electric wires crossed Site R in a conduit from near EW-3 to the tower, with the wire transecting the top of the trench.

Table 2
Trench Profile (Downrigger Measurements) for the Barrier Wall Trench – June 25, 2004 (PM)

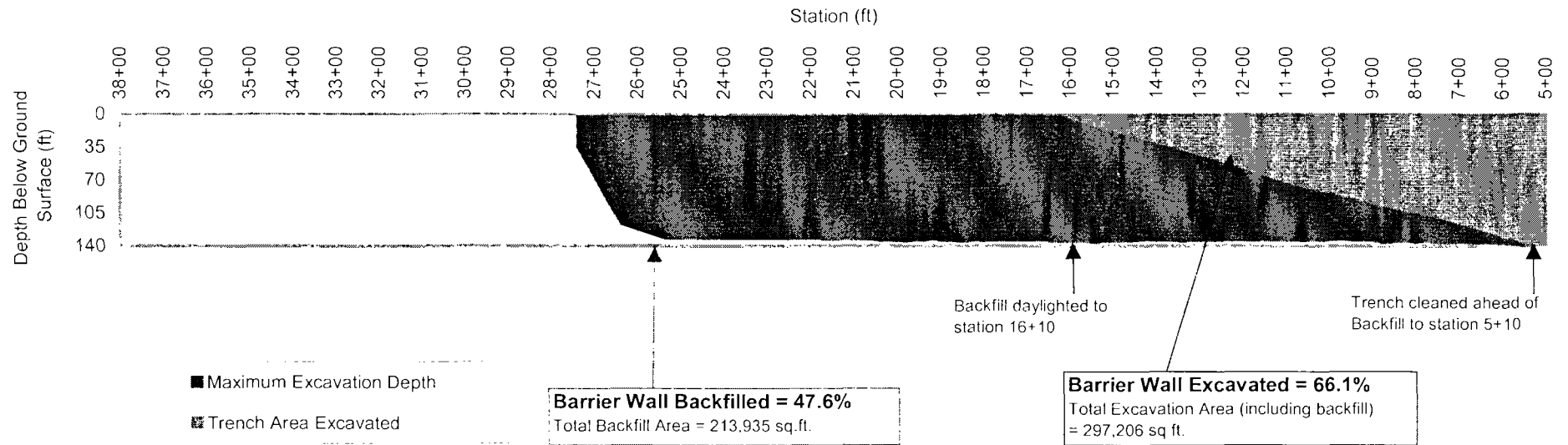
Station ID	Depth to bottom (ft below ground surface)
5+00	139
5+20	139
5+40	141
5+60	135
5+80	132
6+00	130
6+20	126
6+40	124
6+60	121
7+60	108
8+60	99
9+60	87
10+60	77
11+60	63
12+60	48
13+60	35
14+60	22
15+60	10
16+00	3

Graph 1 - Weekly Barrier Wall Construction Progress
June 18 through June 25, 2004



Note: Data plotted for the week through PM measurements on 6-18-04 and 6-25-04.
Some data points are interpolated between the available data points where trench depth measurements were read.

Graph 2 - Barrier Wall Construction Progress by June 25, 2004 (PM)

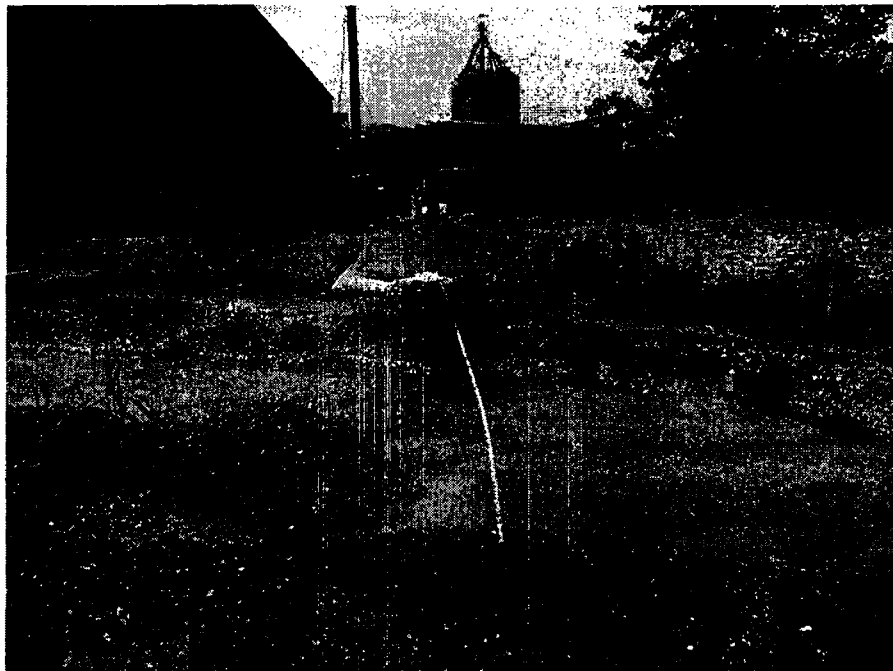


Note: Data plotted for week through PM measurements on 6-25-04.

Photos from June 21 through June 25, 2004:



The desander in operation at station 6+30 (June 23, 2004).



An electric line was installed across the trench to supply power to the beacon on the electrical tower (June 25, 2004).